

MULTIMEDIA



UNIVERSITY®

STUDENT ID NO

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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 1, 2019/2020

### PCA0150 – COMPUTER APPLICATIONS

(Foundation in Information Technology / Foundation in Law / Foundation in Life Science)

17 October 2019  
2.30 p.m. – 4.30 p.m.  
(2 Hours)

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#### INSTRUCTIONS TO STUDENT

1. This question paper consists of **THREE** pages (excluding the cover page).
2. Answer **ALL** questions.
3. Write your answers in the Answer Booklet.

**Instructions:** Answer **ALL** questions. Write your answers in the Answer Booklet.

**QUESTION 1 [10 Marks]**

- a. A computer has four operations which are input, process, output and store. Explain each of these operations and provide **TWO (2)** examples of hardware that are involved in each of these operations.  
(4 marks)
- b. System software is a collection of programs that manage computer resources at a low level. Answer the following questions that are related to system software.
- Give **TWO (2)** examples of system software.
  - Briefly discuss what a booting process is.
  - Explain the meaning of multi-tasking in an operating system.
- (3 marks)
- c. You are planning to work from house for several days, but with all of the concerns about copyright infringement you are unsure whether you are allowed to install a program you use at the office on your home computer. Describe **THREE (3)** types of software that can be downloaded for free and their limitations, if any.  
(3 marks)

**QUESTION 2 [10 Marks]**

- a. Computer communication allows people to communicate with each other using applications such as email and instant messaging. Using illustration, suggest **FOUR (4)** components needed for successful communication to happen between two or more devices and label each of the components.  
(4 marks)
- b. Sarmilah was assigned by her lecturer to use computer-based trainings (CBT) methods to explain *Momentum and Collision Theory* in Physics. She must include multimedia elements in her presentation in order to make her presentation interactive. State **THREE (3)** advantages of computer-based trainings (CBT) over traditional trainings.  
(3 marks)
- c. Refer to the table below and answer these questions:

| Fields checked    | Valid data | Invalid data |
|-------------------|------------|--------------|
| Birth Date        | 11/12/1990 | 23/05/2011   |
| Registration Date | 12/05/2014 | 13/11/1999   |

- i. Identify the suitable validity check for the data given above. Give **ONE (1)** reason to support your answer.  
(1.5 marks)

**Continued...**

- ii. Name other **THREE (3)** validity checks that can be used to ensure data integrity in a database.

(1.5 marks)

**QUESTION 3 [10 Marks]**

- a. Should any organization require new hardware or software, the system analyst or IT personnel must install and test it. There are many tests that can be performed during an installation of a new system in the implementation phase of System Development Life Cycle (SDLC). List and describe **FOUR (4)** of the tests.
- b. Lilian has been receiving spam and it fills up the inbox of her e-mail. Explain to Lilian what spam is. Suggest **TWO (2)** ways that she can do to reduce spam.
- c. Unauthorized access is one of the major threats in computer security. Access controls are being used to minimize the chance of a perpetrator intentionally accessing confidential information on a computer. What is access control? What are the different types of access control that are commonly used?

(4 marks)

(2 marks)

(4 marks)

**QUESTION 4 [10 Marks]**

- a. One of the functions of an operating system is to provide user interface. Explain in brief **TWO (2)** types of user interface that are available for an operating system and give **ONE (1)** example for each type mentioned.
- b. What are the **FOUR (4)** examples of logical operation that can be performed by the Arithmetic Logic Unit (ALU)?
- c. Explain the difference between wired and wireless transmission media. Provide **ONE (1)** example for wired and wireless transmission media.

(4 marks)

(2 marks)

(4 marks)

**Continued...**

**QUESTION 5 [10 marks]**

- a. What is the difference between *serif* typeface and *sans-serif* typeface? Which typeface is recommended to be used when creating a document file and why is that?  
(2 marks)
- b. Project management is the process of planning, scheduling and controlling the activities during system development. Wong has been elected as a project leader. As a leader, he has to plan and schedule a project effectively.
- i. List **TWO (2)** elements that Wong has to identify in order to plan and schedule a project effectively?  
(2 marks)
- ii. Suggest to Wong, **TWO (2)** tools that he can use to plan and schedule the time relationship among project activities.  
(1 mark)
- c. Data is organized in levels. IT professionals classify data in hierarchy. Field is one element in database hierarchy. Why do some fields that store only numbers have a text data type? For example, postal code and phone number.  
(2 marks)
- d. Suggest any possible network communication protocol or standard that can be used for these scenarios:
- i. A mobile phone and a laptop
- ii. Electronic toll collection
- iii. To change TV channel using remote control.  
(3 marks)

**End of Paper**